DETAILED ACTION

Response to Amendment

This office action is in response to amendment filed on 8/10/11. Claims 1, 4-7, and 11 have been amended.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Comeau (US 2002/0103942) in view of Bozzone (US 2005/0033515).

Regarding claim 1, Comeau teaches a mobile communication terminal (paragraph 110), comprising:

first memory means (receive buffer) and second memory means (software data structure) for storing data (paragraphs 92, 93);

an operating system (OS of MS) arranged to access data stored in said first memory means (OS controls hardware and software fundamental operations of MS) (paragraph 41);

an application execution environment (Java virtual machine) that is executable on said operating system and that executes a platform-independent application (application program), said platform-independent application having access to data stored in said second memory means (software data structure stores data that may be utilized by an application program or other software) (paragraph 98);

detection means for detecting data received by a receive buffer (paragraphs 3-95, 99);

memory process means for performing a memory process to store detection result data acquired based on detection results by said detection means in said first memory means (data received is stored in receive buffer) (paragraphs 93-95, 99),

data transfer means (DMA/JNI) for transferring the detection result data stored in said first memory means to said second memory means, according to a data transfer instruction from said application execution environment (paragraphs 91, 94, 95, 98, 99),

wherein said application execution environment executes said platform-independent application using the detection result data stored in said second memory means (Java virtual machine executes application program using data in software data structure (paragraphs 98, 101).

Comeau teaches that the application program may utilize data received from a peripheral or device such as the data reception/transmission function of a baseband circuit (paragraph 91), but does not explicitly teach that the detection means are controlled using the operating system for detecting at least one of position, direction, attitude and movement of the mobile communication terminal along at least one axis of a coordinate system; and that the detection result data includes information concerning changes to the at least one of position, direction, attitude and movement of the mobile communication terminal along the at least one axis. Bozzone discloses a wireless personal tracking and navigation system comprising a wireless device, a pedometer electrically coupled to the wireless communication device, and an electronic compass operably positioned with respect to the pedometer (abstract). Bozzone teaches that a pedometer (peripheral or device), can be coupled to a wireless communication device via a wired or wireless link (paragraph 23). When the mobile communication device is coupled to the pedometer, it can extract or inspect the position information (at least one of position, direction, attitude, and movement of the mobile communication terminal) stored within the pedometer when desired by an application program (being controlled by the operating system of the mobile communication device) loaded on the wireless communication device to track the location of a person or provide navigation services to a user (paragraphs 31, 32, and 37). Therefore it would have been obvious to one of ordinary skill in the art to modify the mobile station of Kamiya to include sensors that detect data concerning at least one of position, direction, attitude and movement of the mobile communication terminal along at least one axis of a coordinate system and an

applications that utilizes this detection data, as taught by Sorvari, in order to provide the user with a personal navigation and tracking system. This modification would enhance user experience by allow the user to calculate walking speed and/or distance or provide navigational information, in for example, a heavily forested or deep valley area. Personal tracking systems are also known in the art to provide remote monitoring of people such as prisoners, workers in higher-risk work areas, and patients who are prone to wander and get lost.

Regarding claim 2, Comeau teaches a mobile communication terminal according to claim 1, wherein said application execution environment has an instruction set (JNI) for generating said data transfer instruction according to description in said platform-independent application (paragraphs 91, 11, 12).

Regarding claim 3, Comeau teaches a non transitory computer readable medium storing an application program, the application program characterized in that a computer in said mobile communication terminal according to claim 2 works so that the application execution environment generates said data transfer instruction using said instruction set (JNI), by being executed by said application execution environment (paragraphs 91, 11, 12).

Regarding claim 4, the limitations are rejected as applied to claim 1. Bozzone further teaches the mobile station comprises an electronic compass (3-axis magnetic sensor) and an accelerometer used to detect steps (2-axis accelerometer) (paragraphs 22, 31, 32).

Regarding claims 5, 6, 7, and 11, the limitations are rejected as applied to claim 1.

Regarding claim 8, Bozzone teaches a mobile communication terminal according to claim 5, 6 or 7, further comprising:

a radio communication device that communicates by wireless communication utilizing radio waves (paragraph 20); and

a radio wave strength confirmation device that confirms strength of the radio waves utilized by said radio communication device at specified time intervals (GPS reception is confirmed at intervals where the user is in a place where GPS signals can not be received or are low such as a canyon or building);

wherein said data processor is used as at least one part of said radio wave strength confirmation device and performs said data process when confirming radio wave strength (when GPS is not available pedometer and electronic compass is used to supply position data to the application) (paragraph 43).

Regarding claim 9, Bozzone teaches a mobile communication terminal according to claim 4, 5, 6, or 7 wherein said detection device includes an angle detection device (electronic compass) that detects an angle against the standard angle around a virtual axis leading to a specified direction (north, south, east, west) (paragraph 22).

Regarding claim 10, Bozzone teaches a mobile communication terminal according to claim 4, 5, 6, or 7, wherein said detection device includes an acceleration detection device that detects acceleration toward a specified direction working on said mobile communication terminal (paragraph 31).

Regarding claim 12, Comeau teaches the mobile communication terminal according to claim 11, wherein the application execution environment is executed using a processor that is the same as the memory processor (figure 3a).

Regarding claim 13, Comeau teaches the mobile communication terminal according to claim 11, wherein the first memory (receive buffer) and the second memory are different memory locations on a memory device (software data structure) (paragraph 100).

Regarding claim 14, Bozzone teaches the mobile communication terminal according to claim 11, wherein the at least one sensor includes at least one of: a magnetic sensor and an acceleration sensor (paragraphs 31, 32).

Regarding claim 15, Bozzone teaches the mobile communication terminal according to claim 14, wherein the at least one sensor includes a geomagnetic sensor (paragraph 31).

Regarding claim 16, Bozzone teaches the mobile communication terminal according to claim 11, wherein the coordinate system includes a spatial three-axis coordinate system (paragraph 22).

Regarding claim 17, the combination of Comeau and Bozzone teaches the mobile communication terminal according to claim 11, wherein execution of the platform-independent application using the detection result data (Comeau; paragraphs 93, 94, 95 99; data received from a peripheral or device) includes displaying an action on a display of the mobile communication terminal that corresponds to a change in the at least one

of position, direction, attitude and movement of the mobile communication terminal (Bozzone; paragraph 46).

Regarding claim 18, the combination of Comeau and Bozzone teaches the mobile communication terminal according to claim 11, wherein execution of the platform-independent application (Comeau; paragraph 98; application program) using the detection result data (Bozzone; paragraphs 31, 32, and 37) includes causing at least a portion of the platform-independent application to stop executing in response to a change in the at least one of position, direction, attitude and movement of the mobile communication terminal (Bozzone; paragraph 43; in the combination of the two inventions the program would stop executing the processing of GPS signals when the user is in a place where GPS signals are unavailable or unreliable).

Regarding claim 19, Bozzone teaches a mobile communication terminal according to claim 1 wherein said detection device includes an angle detection device (electronic compass) that detects an angle against the standard angle around a virtual axis leading to a specified direction (north, south, east, west) (paragraph 22).

Regarding claim 20, Bozzone teaches a mobile communication terminal according to claim 1, wherein said detection device includes an acceleration detection device that detects acceleration toward a specified direction working on said mobile communication terminal (paragraph 31).

Response to Arguments

4. Applicant's arguments filed 8/10/11 have been fully considered but they are not persuasive. Applicant argues that the combination of Comeau and Bozzone does not teach detection means for detecting at least one of- position, direction, attitude and movement of the mobile communication terminal along at least one axis of a coordinate system, the detection means being controlled using the operating system for which the Examiner respectfully disagrees. Comeau and Bozzone in combination is the mobile communication terminal comprising an operating system, application execution environment that is executed on the operating system, and platform independent application (paragraphs 41, 91, 98) of Comeau combined with the teachings of Bozzone to allow a device that detects position data (pedometer) to be coupled to the mobile communication terminal and be used by an application program on the mobile communication terminal (paragraphs 31, 32, and 37). Therefore in the combination, the operating system of Comeau controls the position detecting device of Bozzone which satisfies the requirement that the detection means is controlled using the operation system. Bozzone also teaches that an application program, which inherently runs on the operating system of the mobile communication device, controls the pedometer to extract or inspect data when desired (paragraph 32). Furthermore the pedometer of Bozzone gives the position of the mobile terminal when it is coupled to the mobile communication device because both devices may be considered as a single device when coupled. In paragraphs 44-45, Bozzone gives an example of the pedometer being used to determine the location of the user which would also incorporate or include

the location of the mobile communication device as well because of the coupling. Therefore Comeau and Bozzone in combination teaches the limitations of claim 1 including at least detection means for detecting at least one of- position, direction, attitude and movement of the mobile communication terminal along at least one axis of a coordinate system, the detection means being controlled using the operating system.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NAM HUYNH whose telephone number is (571)272-5970. The examiner can normally be reached on 8 a.m.-5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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